Notice of Allowability	Application No.	Applicant(s)	
	10/705,409	HIATT ET AL.	
	Examiner	Art Unit	
	Alexander J. Kosowski	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the after final amendment filed 1/29/07*.

2. ☒ The allowed claim(s) is/are *1,2,4-11,13-58 and 60-79*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1) Claims 1-2, 4-11, 13-58 and 60-79 are presented for examination in light of the after final amendment filed 1/29/07.

Allowable Subject Matter

2) Claims 1-2, 4-11, 13-58 and 60-79 are allowed.

3) The following is an examiner's statement of reasons for allowance:

Referring to claim 1, Sanders, Jr. (U.S. Pat 5,506,607), alone or in combination with the prior art of record, does not explicitly teach a programmable material consolidation apparatus comprising at least one raised element around at least a portion of a periphery of a support surface and a planarization element configured to be drawn across a surface of unconsolidated material located over at least a portion of the at least one substrate and within an interior of a periphery defined by the at least one raised element, in combination with the remaining elements or features of the claimed invention.

Referring to claim 57, Sanders, Jr. (U.S. Pat 5,506,607), alone or in combination with the prior art of record, does not explicitly teach a programmable material consolidation apparatus including an ejection element and at least one recess formed in the support surface, at least one piston configured to be retained within the at least one recess, and at least oen actuator associated with the at least one piston so as to cause at least a portion of the at least one piston to exit the at least one recess and to protrude from the support surface, in combination with the remaining elements or features of the claimed invention.

Referring to claim 64, Sanders, Jr. (U.S. Pat 5,506,607), alone or in combination with the prior art of record, does not explicitly teach a programmable material consolidation apparatus

comprising a retention system including at least one sealing element at the support surface and at least one pressure port formed in the support surface, located within an interior defined by the at least one sealing element, and configured and oriented to facilitate a circulating air flow over the support surface, the retention system configured to prevent lateral movement of the at least one substrate, in combination with the remaining elements or features of the claimed invention.

Referring to claim 65, Sanders, Jr. (U.S. Pat 5,506,607), alone or in combination with the prior art of record, does not explicitly teach a programmable material consolidation apparatus comprising a retention system including an ejection element including at least one recess formed in the support surface, at least one piston configured to be retained within the at least one recess and at least one actuator associated with the at least one piston so as to cause at least a portion of the at least one piston to exit the at least one recess and to protrude from the support surface, in combination with the remaining elements or features of the claimed invention.

Referring to claim 67, Sanders, Jr. (U.S. Pat 5,506,607), alone or in combination with the prior art of record, does not explicitly teach a programmable material consolidation apparatus comprising a retention system including an ejection element including at least one pressure port formed in the support surface and configured and oriented to facilitate a circulating air flow over the support surface and a positive pressure source in communication with the at least one pressure port, in combination with the remaining elements or features of the claimed invention.

Referring to claim 68, Sanders, Jr. (U.S. Pat 5,506,607), alone or in combination with the prior art of record, does not explicitly teach a programmable material consolidation apparatus comprising a retention system including a locking ring including a side wall configured to surround at least a portion of a periphery of the at least one substrate upon positioning of the at

least one substrate on the support surface and a lip which extends laterally and inwardly from an upper end of the side wall and at least one spacer positioned on the support surface within an interior of the locking ring, in combination with the remaining elements or features of the claimed invention.

Referring to claim 71, Sanders, Jr. (U.S. Pat 5,506,607), alone or in combination with the prior art of record, does not explicitly teach a programmable material consolidation apparatus comprising a retention system including a locking ring including a side wall configured to surround at least a portion of a periphery of the at least one substrate upon positioning of the at least one substrate on the support surface and a lip which extends laterally and inwardly from an upper end of the side wall and at least one extension ring positioned on the lip, in combination with the remaining elements or features of the claimed invention.

Referring to claim 72, Sanders, Jr. (U.S. Pat 5,506,607), alone or in combination with the prior art of record, does not explicitly teach a programmable material consolidation apparatus comprising a retention system including a locking ring including a side wall configured to surround at least a portion of a periphery of the at least one substrate upon positioning of the at least one substrate on the support surface and a lip which extends laterally and inwardly from an upper end of the side wall and a planarization element, in combination with the remaining elements or features of the claimed invention.

Referring to claim 79, Sanders, Jr. (U.S. Pat 5,506,607), alone or in combination with the prior art of record, does not explicitly teach a programmable material consolidation apparatus comprising a support surface and an ejection element including at least one pressure port formed in the support surface and configured and oriented to facilitate a circulating air flow over the

support surface and a positive pressure source in communication with the at least one pressure port, in combination with the remaining elements or features of the claimed invention.

Referring to all other claims, the claims are dependent on allowable independent claims, and are therefore allowable.

4) Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander J Kosowski whose telephone number is 571-272-3744. The examiner can normally be reached on Monday through Friday, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. In addition, the examiner's RightFAX number is 571-273-3744.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Alexander J. Kosowski
Primary Examiner
Art Unit 2125